PERSPECTIVA . A NUREMBERG RENAISSANCE CASKET FOR THE MARQUESSES OF LOTHIAN

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THE COURT CASKET OWNED BY THE MARQUESSES OF LOTHIAN

A MASTERPIECE OF NUREMBERG PERSPECTIVE ART

Virginie Spenlé

Towards the mid-16th century a new type of collection came into being: Kunst- and Wunderkammer. In them, 'artificial' works, *artificilia*, were contrasted with *naturalia*, natural objects, to represent the macrocosm as a microcosm, and at the same time place man's place in divine Creation. The establishment of Kunst- and Wunderkammer at court created a demand for valuable collection furnishings. Consequently, the cabinet, at the time known as a *schreibtisch* or *scrittorio*, i.e. 'writing-desk', developed from a showy piece of portable furniture into a magnificent container for collections.[1] Probably the most famous Renaissance 'writing-desk' is the *Wrangelschrank* (1566), which can be admired today in the Westphalian State Museum in Münster.[2]

In parallel, a different type of Kunstkammer furniture developed: the court casket, which was often designed as a piece of architectural furniture to be viewed from all sides and was usually placed on a table at the centre of a Kunstkammer.[3] As a prime example of this type, the court casket owned by the marquesses of Lothian (Fig. 1) will be presented in the following. Since the 18th century at the latest, this unique piece of Kunstkammer furniture fit for princes had been in the collections of the marquesses of Lothian, and was for a long time displayed in Newbattle Abbey.

Unlike the *Wrangelschrank*, the court casket from Newbattle Abbey is not a cabinet decorated on all sides with intarsia of native woods but rather a model *palazzo*, covered in precious materials such as ebony, ivory, alabaster, and mother-of-pearl. The appearance of this peerless piece of Kunstkammer furniture is enhanced by exquisite engravings on ivory as well as illusionistic representations of geometric forms that decorate the casket inside and out.

(Fig. 1)

The court casket from Newbattle Abbey

MASTER OF PERSPECTIVE . NUREMBERG, DATED 1565

NATIVE WOODS, EBONY, MOTHER-OF-PEARL, ALABASTER, ENGRAVED IVORY AND BONE

FITTINGS: PARTLY ETCHED AND FIRE-GILT IRON, FIRE-GILT BRASS . HEIGHT 34.5 CM, WIDTH 53 CM, DEPTH 36 CM

LONDON, KUNSTKAMMER LTD. AND TRINITY FINE ART LTD.

The rectangular casket, articulated in the vertical by aedicules and round arches, rises above the equivalent of a rusticated base zone with drawers (Fig. 2). Whereas geometric intarsia patterns enliven the pilasters, the architraves and the framing of the round arches, herms are fully in the round, as are lion masks in tondi and cherub heads in tympana (Fig. 3). The round arches open like windows on to figurative scenes executed in engraved ivory. What is depicted is revealed by inscriptions applied in banderoles, cartouches and the lower edges of picture fields. Between female personifications of the Four Temperaments and of four virtues, a history picture is centred on each façade of the casket: the stories of Sophonisba and Massinissa, Aristotle and Phyllis, Duke Herkinbald and his nephew as well as Samson and Delilah are illustrated.

(Fig. 2)

Drawer from the Newbattle Abbey casket

(Fig. 3)

Frontside of the Newbattle Abbey casket

SAMSAN · 1565

The date ‘1565’ is beneath the last-named scene (Fig. 4). This means the court casket discussed here and the *Wrangelschrank*, which was made a year later, are among the earliest dated pieces of Kunstkammer furniture.

(Fig. 4)

Date ‘1565’ and representation of Samson and Delilah

ON THE NEWBATTLE ABBEY CASKET

On the lid of the casket various platonic solids and regular polyhedra are represented as three-dimensional configurations according to the rules of linear perspective (Fig. 5). The illusion is perfect and fascinates viewers, who can scarcely pull themselves away from this *trompe l'oeil*. The lid opens to reveal another representation of a geometric solid (Fig. 6): a regular icosahedron, a polyhedron with twenty regular faces, in what is known as a *mazzocchio*, a polygonal torus which is octagonal in cross-section (Fig. 7).[4] Inside the casket there is a rectangular inset with a lid that snaps open to hold smaller objects; it, too, is inlaid with polyhedral intarsia.

(Fig. 5)

Polyhedral marquetry

ON THE LID OF THE NEWBATTLE ABBEY CASKET

(Fig. 6)

The court casket from Newbattle Abbey

(Fig. 7)

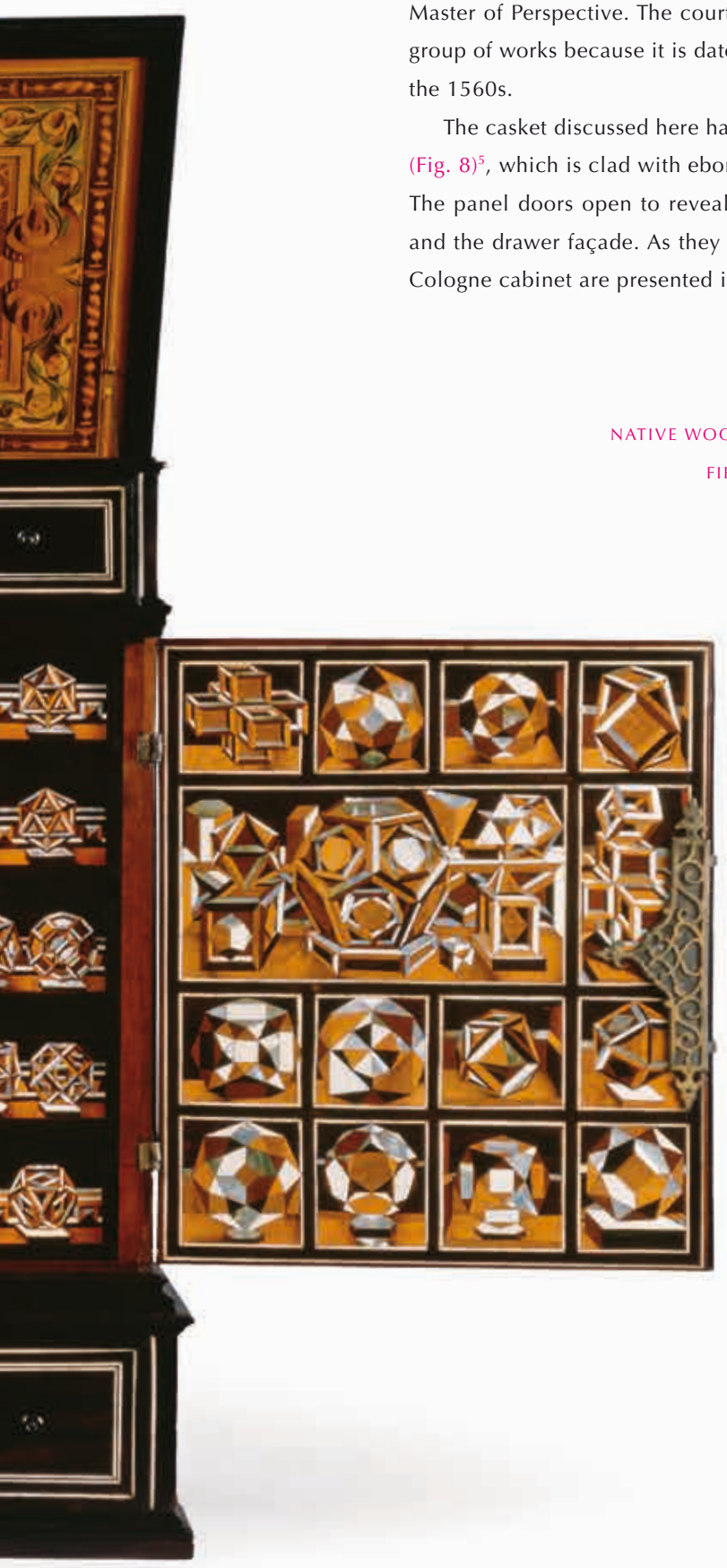
Polyhedron and *mazzocchio*

ON THE LID'S BACKSIDE OF THE NEWBATTLE ABBEY CASKET

RENAISSANCE KUNSTKAMMER FURNITURE
BY THE NUREMBERG MASTER OF PERSPECTIVE

Only eleven pieces of furniture in varying formats with the same decoration consisting of polyhedra worked in intarsia combined with engraved ivory scenes have survived in private and public collections. The pieces were evidently made at the same workshop, whose leading master craftsman can be identified as the Master of Perspective. The court casket from Newbattle Abbey is of pivotal importance for identifying this group of works because it is dated 1565, hence makes it possible to date the group of comparable pieces to the 1560s.

The casket discussed here has affinities with the large cabinet in the Museum of Applied Arts in Cologne (Fig. 8)[5], which is clad with ebony veneer on the outside and inlaid with figurative intarsia of native woods. The panel doors open to reveal stunning decoration of geometric solids covering the inside of the doors and the drawer façade. As they are on the court casket from Newbattle Abbey, the geometric solids on the Cologne cabinet are presented in illusionistic perfection.



(Fig. 8)

Large cabinet

MASTER OF PERSPECTIVE . NUREMBERG, CA 1560-1570

NATIVE WOODS, EBONY, MOTHER-OF-PEARL, IVORY, BONE; FITTINGS: PARTLY ETCHED AND FIRE-GILT IRON, FIRE-GILT BRASS . HEIGHT 79 CM, WIDTH 82 CM, DEPTH 45 CM

COLOGNE, MUSEUM OF APPLIED ARTS, INV. NO. A 1451

In addition to a medium sized cabinet with integrated intarsia panels of the same style in a German private collection, there is a small cabinet decorated with polyhedra in the Metropolitan Museum of Art in New York (Fig. 9), while another, nearly identical piece of the same size is owned by a private collector (Fig. 10): each of these miniaturised collector's items is equipped with a flap that pulls down to reveal various polyhedra inside that are interlaced and juxtaposed.[6]

(Fig. 9)

Miniature cabinet

MASTER OF PERSPECTIVE . NUREMBERG, CA 1560-1570

NATIVE WOODS, EBONY, MOTHER-OF-PEARL, PARTLY ENGRAVED IVORY AND BONE; REVERSE-GLASS PAINTING; GOLD-TOOLED LEATHER FITTINGS: PARTLY ETCHED AND FIRE-GILT IRON, FIRE-GILT BRASS . HEIGHT 15.6 CM, WIDTH 18.7 CM, DEPTH 14 CM

NEW YORK, THE METROPOLITAN MUSEUM OF ART, INV. NO. 48.59.2

(Fig. 10)

Miniature cabinet

MASTER OF PERSPECTIVE . NUREMBERG, CA 1560-1570

NATIVE WOODS, EBONY, MOTHER-OF-PEARL, PARTLY ENGRAVED IVORY AND BONE; GOLD-TOOLED LEATHER

FITTINGS: PARTLY ETCHED AND FIRE-GILT IRON, FIRE-GILT BRASS . HEIGHT 16 CM, WIDTH 19 CM, DEPTH 15 CM

PRIVATE COLLECTION

The same decoration is encountered in heightened complexity on a writing-desk in the Museum for Applied Art in Frankfurt am Main (Fig. 11) and again in a somewhat simplified composition on a second writing-desk in a German private collection (Fig. 12).[7]

(Fig. 11)

Writing-desk

MASTER OF PERSPECTIVE . NUREMBERG, CA 1560-1570

NATIVE WOODS, EBONY, MOTHER-OF-PEARL, PARTLY ENGRAVED IVORY AND BONE

FITTINGS: PARTLY ETCHED AND FIRE-GILT IRON . HEIGHT 18 CM, WIDTH 51 CM, DEPTH 49 CM

FRANKFURT AM MAIN, MUSEUM FOR APPLIED ART

INV. NO. WNK 2

(Fig. 12)

Writing-desk

MASTER OF PERSPECTIVE . NUREMBERG, CA 1560-1570

NATIVE WOODS, EBONY, IVORY; FITTINGS: PARTLY ETCHED AND FIRE-GILT IRON

PRIVATE COLLECTION

In the Kunstkammer at the Kunsthistorisches Museum in Vienna, there is a box for board games including Nine Men's Morris, tric trac (a variant of backgammon) and chess; the inside of the box is inlaid with geometric solids executed in marquetry (Fig. 13).[8] A second games box was owned by Axel Vervoordt at van's-Gravenwezel Castle (Fig. 14).[9]

(Fig. 13)

Games box

MASTER OF PERSPECTIVE . NUREMBERG, CA 1560-1570

NATIVE WOODS, EBONY, MOTHER-OF-PEARL, PARTLY ENGRAVED IVORY AND BONE . HEIGHT 6 CM, WIDTH 46.8 CM, DEPTH 46.9 CM

VIENNA, KUNSTHISTORISCHES MUSEUM, KUNSTKAMMER

INV. NO. KK 3792

(Fig. 14)

Games box

MASTER OF PERSPECTIVE . NUREMBERG, CA 1560-1570

NATIVE WOODS, EBONY, MOTHER-OF-PEARL, PARTLY ENGRAVED IVORY AND BONE . HEIGHT 12.8 CM, WIDTH 42 CM, DEPTH 42 CM

FORMERLY VAN'S-GRAVENWEZEL CASTLE, AXEL VERVOORDT COLLECTION

In the same collection there was, until 2004, a small cabinet with a missing front door (Fig. 15).[10] The last gem in this group of works is a small, privately owned casket with geometric solids executed in intarsia (Fig. 16): in its basic form it is akin to the court casket from Newbattle Abbey, which is, however far larger and more elaborate.

(Fig. 15)

Cabinet

MASTER OF PERSPECTIVE . NUREMBERG, CA 1560-1570

NATIVE WOODS, EBONY, IVORY, BONE . HEIGHT 38.7 CM, WIDTH 49.5 CM, DEPTH 31.2 CM

FORMERLY VAN'S-GRAVENWEZEL CASTLE

AXEL VERVOORDT COLLECTION

(Fig. 16)

Casket

MASTER OF PERSPECTIVE . NUREMBERG, CA 1560-1570

NATIVE WOODS, EBONY, IVORY, BONE; FITTINGS: ETCHED AND FIRE-GILT IRON, FIRE-GILT BRASS

HEIGHT 21 CM, WIDTH 26 CM, DEPTH 18.5 CM

PRIVATE COLLECTION

The features common to all the above mentioned cabinets, writing-desks, games boxes and caskets are not only intarsia decoration consisting of geometric solids but also inlaid ivory, some of it engraved with decorative patterns (Fig. 17), the rest with figurative scenes (Fig. 18). The stories of Orpheus and Actaeon, deriving from prototypes by the Nuremberg engraver Virgil Solis (1514-1562), are depicted on the miniature cabinets in New York and its counter-piece in a private collection as well as on the Frankfurt writing-desk (Figs. 19-20).

The stylistic parallels with the Newbattle Abbey casket are unmistakable and indicate that the same ivory engraver was at work. The pieces of Kunstkammer furniture listed above are also distinguished by technical features from the cabinetmaking angle, which imply that these furnishings were all made at the workshop owned by the Master of Perspective.

(Fig. 17)

Games box by the Master of Perspective

VIENNA, KUNSTHISTORISCHES MUSEUM

KUNSTKAMMER, INV. NO. KK 3792

(Fig. 18)

Inlaid ivory with engraved scenes

ON THE NEWBATTLE ABBEY CASKET

(Fig. 19)

Miniature cabinet by the Master of Perspective

WITH IVORY ENGRAVINGS FEATURING ORPHEUS

PRIVATE COLLECTION

(Fig. 20)

Writing-desk by the Master of Perspective

WITH IVORY ENGRAVINGS FEATURING ACTAEON

FRANKFURT AM MAIN, MUSEUM FOR APPLIED ART,

INV. NO. WNK 2

A characteristic feature is, for instance, the simple design of the interiors, which are clad with manna ash veneer, its natural veining enhanced by framing strips of walnut and ripple-figured curly tiger maple (Fig. 21). The bar-shaped inset inside the court casket occurs not only in the smaller casket in private hand (Fig. 22), but also in the two writing-desks.

Also noteworthy are the precious etched and fire-gilt mounts and fittings that recur on most pieces in this group, including the two writing-desks, in varying lengths and shapes (Figs. 7, 8 & 22).

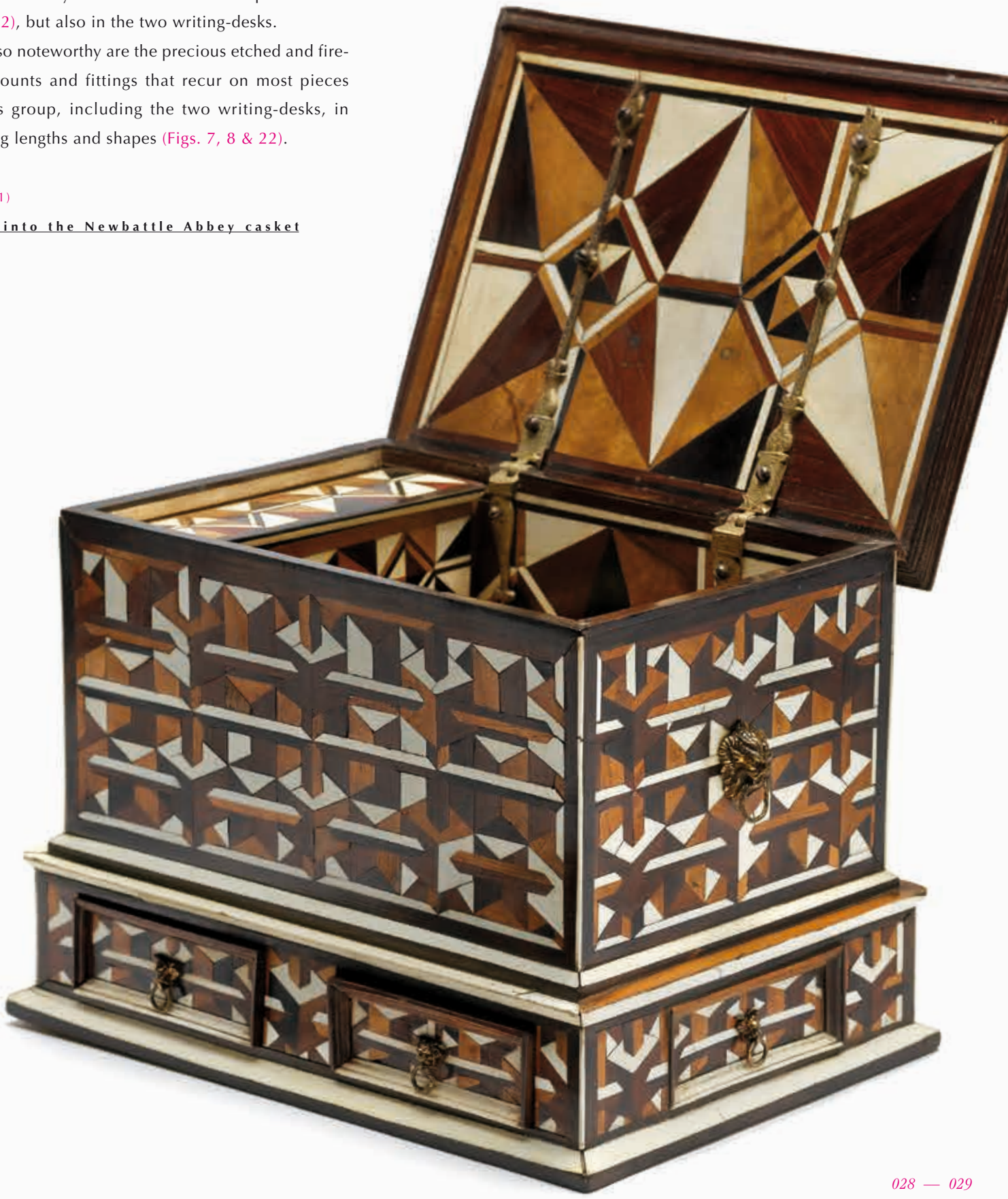
(Fig. 21)

View into the Newbattle Abbey casket

(Fig. 22)

Casket by the Master of Perspective

PRIVATE COLLECTION



The Cologne cabinet and the Viennese games box are externally veneered with intarsia of native deciduous woods and fruitwoods, distinguishing features of furniture of this kind produced mainly in Augsburg in the latter half of the 16th century. Both archive materials and individual works document the position of Augsburg 'chest-makers' [*kistler*] as leaders of their field, who exported their 'writing-desks' to markets as distant as Spain (Fig. 23).[11] However, cabinets inlaid with intarsia of a quality virtually on a par with that of the Augsburg pieces were also made in Ulm, Innsbruck and Nuremberg.[12] Nuremberg even contributed crucially to the flowering of the craft of marquetry: there, masters such as Leonhard Danner developed sophisticated tools that made it possible for cabinetmakers to attain the utmost precision in working intarsia veneers.[13] The development of printmaking, which certainly flourished in 16th-century Nuremberg, also had a positive effect on the making of showy furnishings. The Nuremberg engravers not only worked for the book and print market: many specialised in engraving on ivory in order to collaborate with *kistler* workshops on decorating costly objects such as the group of Kunstkammer furnishings discussed here.

Whether these works were made in Nuremberg or Augsburg cannot be determined on the basis of stylistic analysis alone; the priority given to geometric solids as decoration is the deciding factor. In fact, the illusionistic polyhedral figurations identify the Master of Perspective as a Nuremberg *kistler* – and also a leading light in the aesthetic development ushered in by the invention of linear perspective in Florence during the *quattrocento* and culminating in the 1560s in Nuremberg with the emergence of the polyhedron as an independent pictorial motif in its own right.

(Fig. 23)

The Madrid cabinet

BARTHOLOMÄUS WEISHAUPT . AUGSBURG, 1565-1567

PARTLY COLOURED NATIVE WOODS; FITTINGS: ETCHED AND FIRE-GILT IRON

HEIGHT 48 CM, WIDTH 55 CM, DEPTH 40 CM

PRIVATE COLLECTION

LINEAR PERSPECTIVE AND MARQUETRY IN *QUATTROCENTO* FLORENCE

The principles of linear perspective were first laid down in 1435/36 by the architectural theorist Leon Battista Alberti (1404-1472) in his treatise *De pictura*. Apart from the basics of Euclidean geometry, Alberti explains the principles of perspective representation, which, through the introduction of a vanishing point, a horizon line and, through corresponding foreshortening, matches the proportions of what is actually seen. This knowledge does not, however, derive from Alberti but rather from the practically-minded architect and engineer Filippo Brunelleschi (1377-1446), who empirically grasped the possibility of linear perspective representation.

Brunelleschi had developed a method of designing urban panoramas with the aid of a mirror and a panel with a peephole, which he afterwards underpinned with geometry.[14] With this seemingly modest apparatus, Brunelleschi had provided artists with a set of easily followed instructions for depicting space following the model of visual perception and at the same time created an 'order of visual appearance' that in mathematical terms described visual space as seen.[15] Linear perspective or *costruzione legittima*

(Fig. 24)

The bewitched groom

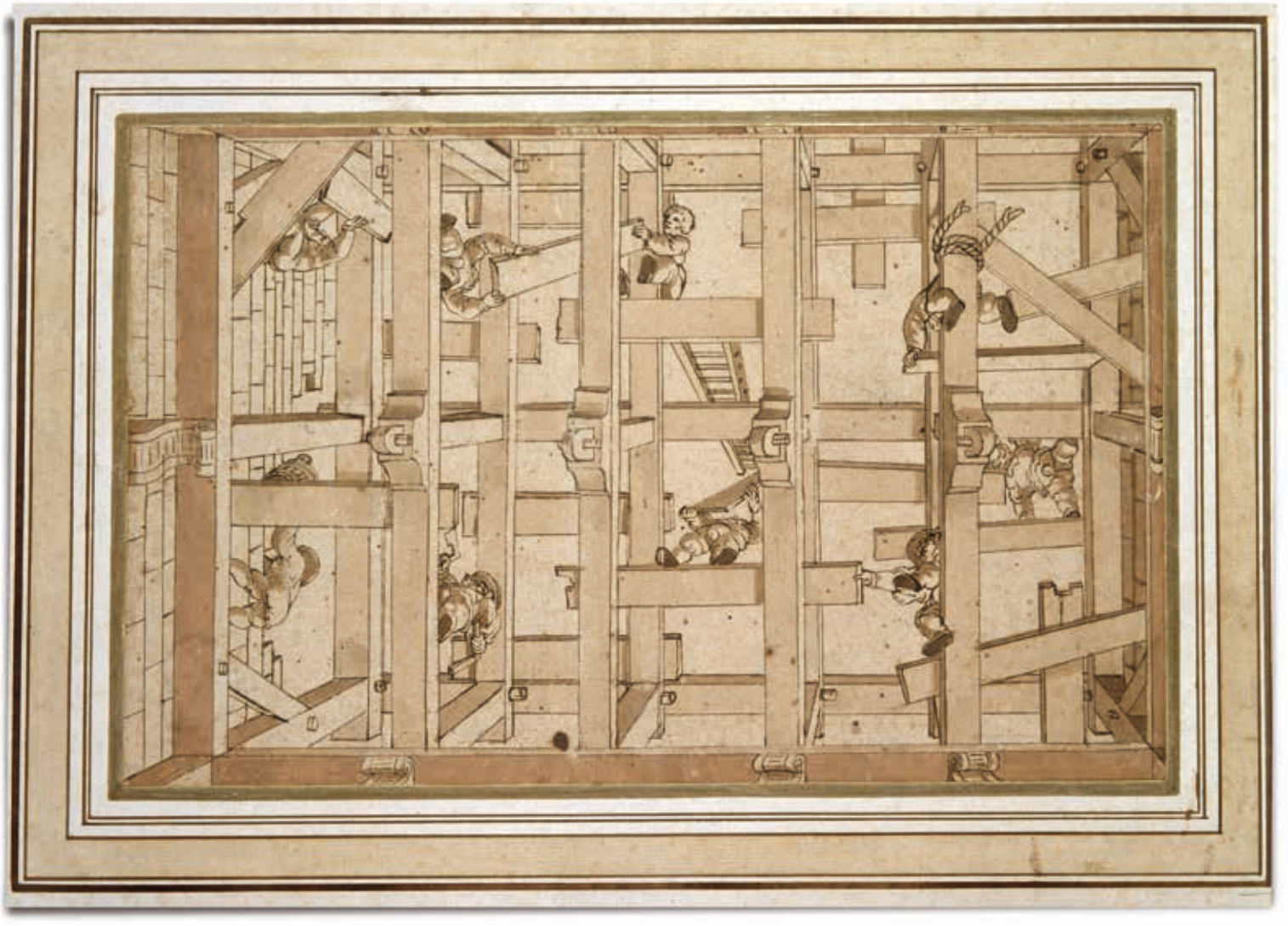
HANS BALDUNG GRIEN . NUREMBERG, 1544

ENGRAVING . HEIGHT 33.9 CM, WIDTH 20 CM

AMSTERDAM, RIJKSMUSEUM, INV. NO. RP-P-OB-4122

[legitimate construction] as it was called at the time, gained acceptance within the briefest of timespans in painting and printmaking, where it not only aided in the spatial representation of buildings, objects and figures but also became a pretext for the production of ingenious and unorthodox compositions that would have previously been unthinkable (Figs. 24-25).

Brunelleschi did not address painters alone with his invention. The art historian and theorist Giorgio Vasari (1511-1574) remarked in this connection that the architect had made particular efforts to [instruct] in his method 'those who made *tarsia*, i.d., who practised the art of inlaying woods in various colours. He was such an inspiration for them that they put this craft to good use and practising it with great mastery and since then have brought forth many outstanding works that have contributed greatly to the reputation of Florence and been useful to it.'[16] In fact, Brunelleschi's experiments ushered in the golden age of marquetry, and the Florentine masters of intarsia were known beyond the borders of Tuscany as *maestri di prospettiva*, that is, masters of perspective.[17]



(Fig. 25)

Sketch for an illusionistic ceiling fresco

GEORG PENCZ . NUREMBERG, CA 1530-1540

PEN AND REDDISH-BROWN WASH ON BROWNISH-TONED PAPER . HEIGHT 23.8 CM, WIDTH 15 CM

OXFORD, CHRIST CHURCH PICTURE GALLERY

INV. NO. JBS 1429 / INV. 964

OS·VENERANDE·MATRIS·ALVMNOS·DOC

However, what exactly links linear perspective with marquetry? Basically, in both perspective studies and in representations executed in intarsia the world perceived in three dimensions is translated into a two-dimensional networks of lines as artificial, simulated reality. In this they are related to cartography – and it is not coincidental that Brunelleschi's experiments were synchronous with the discovery of Ptolemy's *Geographia*, until then unknown in the West.

The development of volumetric art in cartography provided a grid for conceptualising space that would lead to both the invention of linear perspective and the development of marquetry into illusionistic art.[18] The Tuscan artisans working in marquetry soon specialised in panelling and wainscotting for rooms and elements of rooms from which virtual windows opened on to hilly landscapes or half-open doors provided glimpses of cabinets full of books, scientific and musical instruments and other objects. Apart from a representation of a *mazzocchio* in the *studiolo* at the Palazzo Ducale in Gubbio (Fig. 26) and a variety of geometric solids on the choir stalls at the abbey church of Monte Oliveto Maggiore near Siena (Figs. 27-28), polyhedra are relatively rare in Italian marquetry. The polyhedron did not gain acceptance as a pictorial motif in its own right until a century later – and that was in Nuremberg.

(Fig. 26)

***Studiolo* for Federico da Montefeltro at the Palazzo Ducale in Gubbio**

GIULIANO AND BENEDETTO DA MAIANO . GUBBIO, CA 1478-1482

WALNUT, BEECH, ROSEWOOD, OAK AND DIFFERENT FRUITWOODS . DIMENSIONS OF THE ROOM: HEIGHT 485 CM, WIDTH 518 CM, DEPTH 384 CM . NEW YORK, THE METROPOLITAN MUSEUM OF ART INV. NO. 39.153

(Figs. 27-28)

Intarsia still-lifes on the choir stalls

AT THE ABBEY CHURCH OF MONTE OLIVETO MAGGIORE NEAR SIENA

FRA GIOVANNI DA VERONA . SIENA, 1503-1506

PERSPECTIVE ART IN NUREMBERG:
THE TRIUMPH OF THE POLYHEDRON IN ART AND SCIENCE

Like Florence in the *quattrocento*, 16th-century Nuremberg was a European capital in which an economic upturn was synchronous with a flourishing of the arts and sciences. Influential humanists such as Willibald Pirckheimer (1470-1530), great artists including Albrecht Dürer (1471-1528) and celebrated mathematicians such as Johann Neudörffer (1497-1563, Fig. 29) were all based in Nuremberg. And more books were printed there than anywhere else. By the early 17th century numerous treatises explaining the rules of linear perspective were published.[19] Since regular solids formed the foundation of instruction in geometry, they were given priority in all those publication. By the mid-16th century, polyhedra constructed by means of linear perspective had become pictorial motifs in their own right.[20]

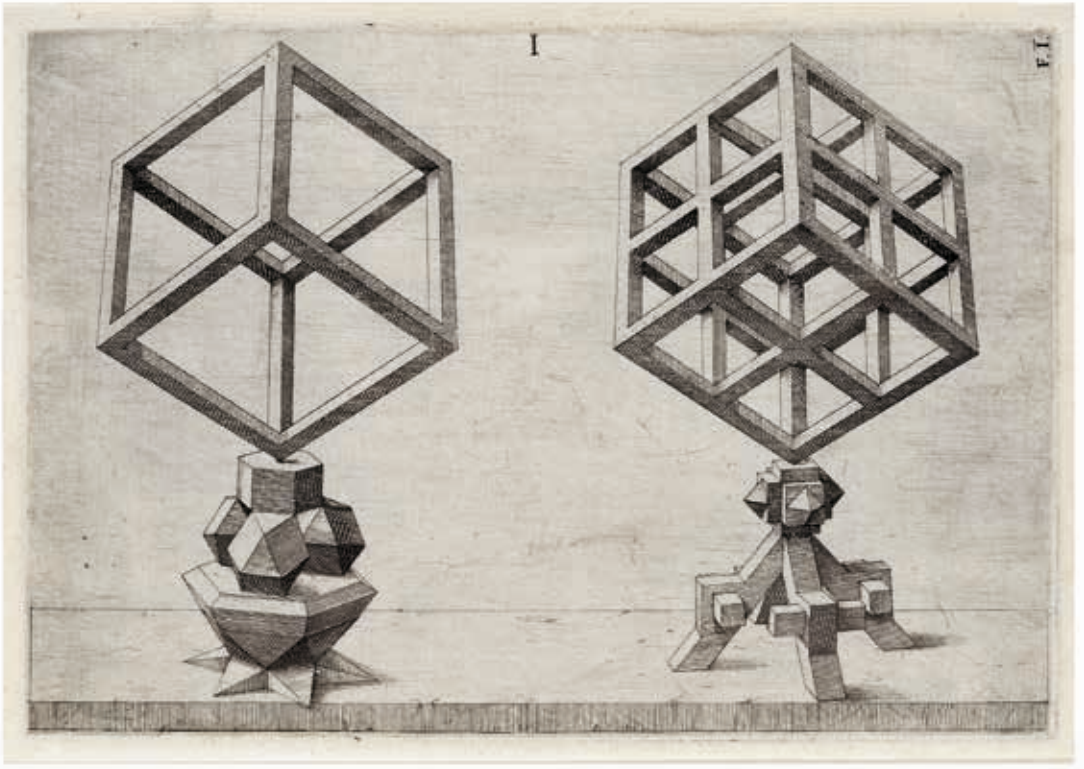
(Fig. 29)

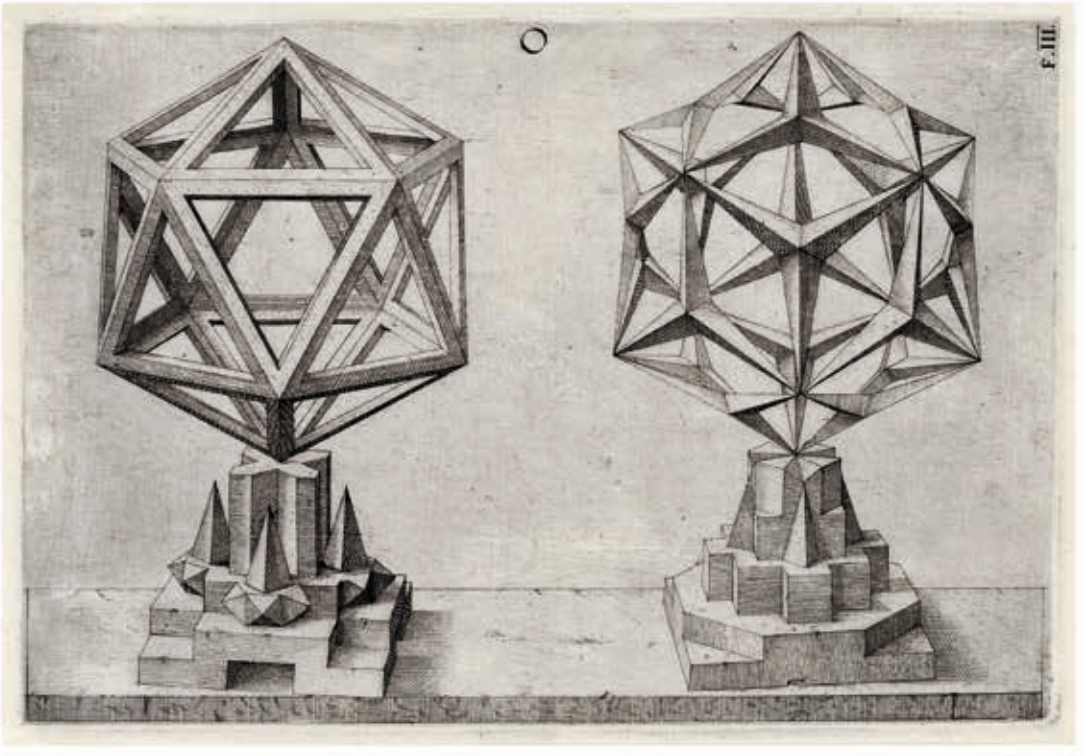
Mathematician Johann Neudörffer with a pupil

NICOLAS NEUFCHÂTEL . NUREMBERG, 1561 . OIL ON CANVAS . HEIGHT 102.3 CM, WIDTH 92.5 CM

NUREMBERG, GERMANISCHES NATIONALMUSEUM, INV. NO. GM1836

This development culminated in the publication of three compendia of copperplates between 1567 and 1568: *Geometria et perspectiva* by Lorenz Stör (ca 1530-1621), *Perspectiva literaria* by Johannes Lencker (1523-1585) and *Perspectiva corporum regularium* (Figs. 30-33) by Wenzel Jamnitzer (1507/08-1585). These three publications differ from earlier treatises on perspective in that the introductory texts are brief and entirely free of both theorising and practical instructions. The focus is on picture plates in large formats, which stunningly showcase regular solids either severally or in groupings of complex design. These volumes, therefore, are presented as the aesthetic outcome of intensive study of geometry and at the same time as a collection of patterns for artists.





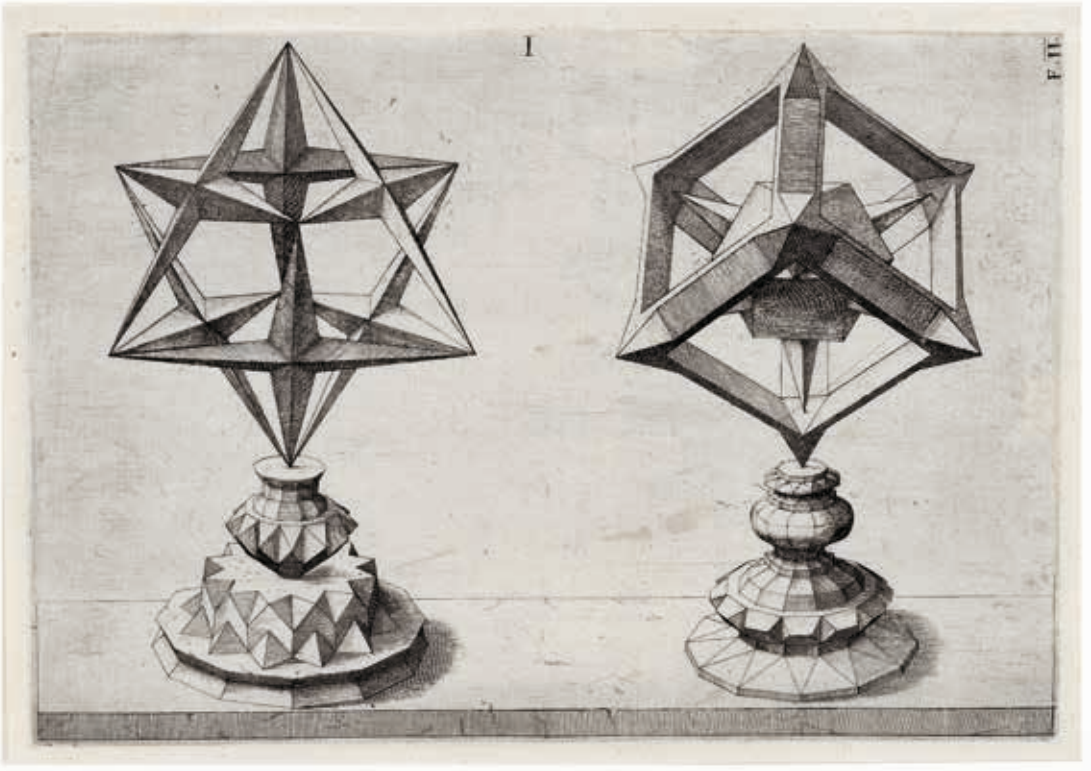
(Figs. 30-33)

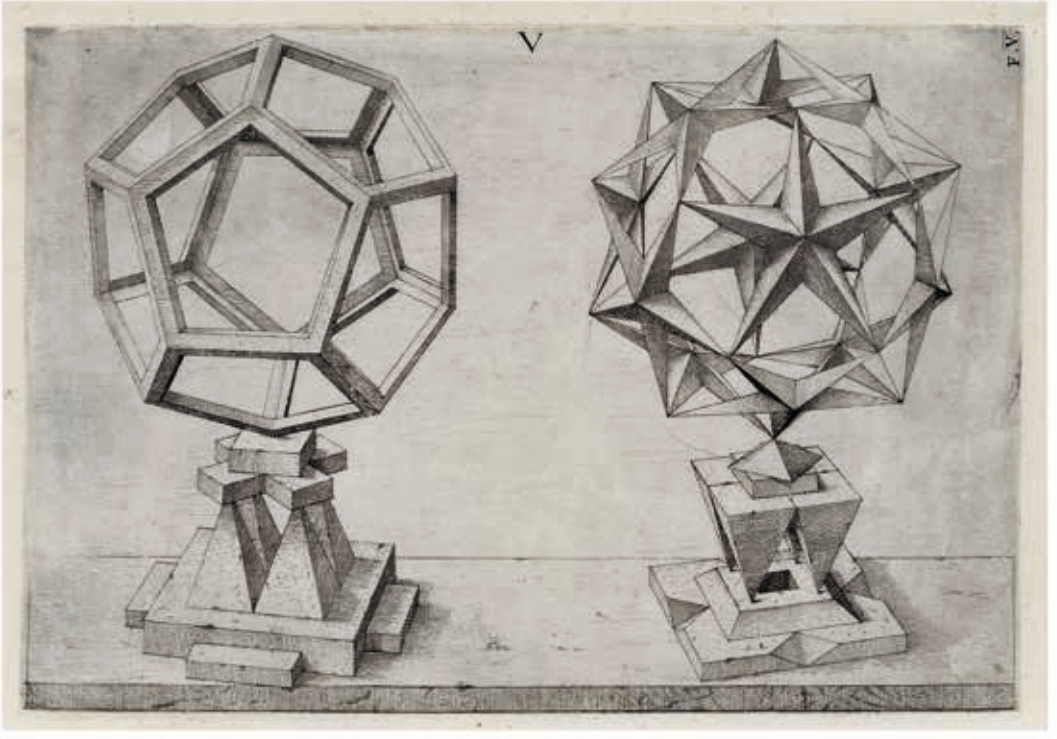
Variations on the Platonic solids

from Jamnitzer's *Perspectiva corporum regularium*

JOST AMMAN AFTER WENZEL JAMNITZER . NUREMBERG, 1568 . ENGRAVING

DIMENSIONS OF PLATE: HEIGHT 19 CM, WIDTH 27 CM





The literature on perspective in Nuremberg was *a priori* addressed to all 'artisans working as stonemasons, painters, sculptors, carpenters and that sort of artist' (Fig. 34).[21] Judging from this, the leading exponents of perspective art in Nuremberg were practically trained artists and craftsmen rather than theorists: Jamnitzer and Lencker worked as goldsmiths and Stör as a painter and cabinetmaker, who left Nuremberg in 1557 to settle in Augsburg, the capital of fine cabinetmaking.[22]

Lorenz Stör published his *Geometria et perspectiva* later with the aim of 'being useful to carpenters in inlaid work'.[23] He thus had his finger on the

(Fig. 35)

Landscape with ruins and geometric figures from Lorenz Stör's *Geometria et perspectiva*

NUREMBERG, 1567 . WOODCUT . HEIGHT 27.7 CM, WIDTH 18.9 CM

PRIVATE COLLECTION

pulse because since the 1560s at the latest Augsburg *kistler* had specialised in cabinets featuring marquetry veneer, which, like Stör's woodcuts, represented geometric solids in the midst of phantasmagoric landscapes with ruins and rampant strapwork (Fig. 35). Whereas only a few 'writing-desks' like the Madrid cabinet shown here (Figs. 23 & 36) stand out as top works of south German marquetry, cabinets of this type were so popular that they were made in large numbers and in widely varying quality in Augsburg.[24] Kunstkammer furnishings decorated with purely geometric solids, on the other hand, are extremely rare.

(Fig. 34) . **Polyhedra on the central drawer**
OF THE NEWBATTLE ABBEY CASKET

(Fig. 36)
Polyhedral figures in the Madrid cabinet
BARTHOLOMÄUS WEISHAUPT . AUGSBURG, 1565-1567
PRIVATE COLLECTION

(Fig. 37)

Miniature cabinet by the Master of Perspective

PRIVATE COLLECTION

In fact the court casket from Newbattle Abbey and the ten comparable works by the Master of Perspective occupy a special place in south German cabinetmaking. The complex compositions on the lid of the Frankfurt writing-desk (Fig. 11), on the privately owned miniature cabinet (Figs. 10 & 37), on the internal doors of the Cologne cabinet (Fig. 38) and on the lid of the court casket (Fig. 39) seem to derive from Jamnitzer's *Perspectiva*.[25]

(Fig. 38)

Large cabinet by the Master of Perspective

COLOGNE, MUSEUM OF APPLIED ARTS, INV. NO. A 1451

(Fig. 39)

Polyhedra

ON THE LID OF THE NEWBATTLE ABBEY CASKET

However, it is virtually impossible that his compendium of engravings could have been used as a template because the Newbattle Abbey casket is dated to 1565, which means that it was made three years before *Perspectiva corporum regularium* was published in 1568. Of course the cabinetmaker could draw on other print prototypes to design geometric solids, for instance, Stör's numerous representations of polyhedra. Noteworthy in this connection is a tinted drawing that Lorenz Stör did in 1564; it has striking similarities with the group of furnishings discussed here (Fig. 40).[26]

However, neither engravings by Jamnitzer nor drawings by Stör can be identified as complete matches for the inlaid polyhedral figurations on the furnishings studied here. Were the designs for these unusual intarsia made at the *kistler* workshop itself? That is most likely to have been the case because, since the early 16th century, various apparatuses for drawing had been developed in Nuremberg with which polyhedra could have been put down on paper by users with no prior knowledge of mathematics.[27]

(Fig. 40)

Geometria Perspectiva

LORENZ STÖR, SIGNED . AUGSBURG, DATED 1564 . WATERCOLOUR AND PEN ON PAPER

MUNICH, LUDWIG MAXIMILIAN UNIVERSITY, UNIVERSITY LIBRARY, INV. NO. CIM. 103 (2° COD.MS. 592), FOL. 332

Apart from Hans Lencker, it was mainly Wenzel Jamnitzer who worked intensively on developing scientific implements and mechanical devices for artists.[28] In his introduction to *Perspectiva corporum regularium*, Jamnitzer mentions he had, after forty years of arduous study of the art of perspective, developed a machine with which polyhedra could be drawn easily and rapidly.[29] What that machine looked like is revealed in a copperplate by Jost Amman (1539-1591), in which Jamnitzer is portrayed seated at a drawing board with a tripod, movable staff and threads as the horizon line (Fig. 41).

(Fig. 41)

Wenzel Jamnitzer drawing polyhedra with his perspective machine

JOST AMMAN . NUREMBERG, 1568 . ENGRAVING . HEIGHT 17.4 CM, WIDTH 25.8 CM

NEW YORK, THE METROPOLITAN MUSEUM OF ART, INV. NO. 56.510.2

According to a statement made by Paul Pfinzing (1554-1599), a mathematician and cartographer, Jamnitzer had screwed down 'his perspective table in a special chamber in his house'. Jamnitzer had, however, developed a portable variant: a 'little chest [...] / such that whatever one wants / can be placed and carried to all places / and the perspective can be worked out on it / to suit everyone.'[30] That portable perspective machine was probably not intended for Jamnitzer's own use but rather destined for sale to other artists and craftsmen – probably including cabinetmakers. Jamnitzer's œuvre shows that he maintained close ties to Nuremberg *kistler*. In this respect, it is worth mentioning a small ebony casket in the Martin d'Arcy Collection at Loyola University Chicago (Fig. 42), which Jamnitzer fitted out with silver plaquettes ca 1570.[31] The goldsmith was however not satisfied with providing cabinetmakers with silver plaquettes; in fact, Jamnitzer personally developed his own type of court casket, which was enormously successful, especially with princely collectors.[32] He is highly likely to have collaborated on such projects with a *kistler* workshop, and to have put one of his perspective machines at the disposal of the master who headed that workshop, who subsequently would have specialised in making Kunstkammer furnishings of exotic woods, mother-of-pearl and ivory. The Kunstkammer furnishings made at that workshop stand out sharply from the south German cabinetmaking typical of the latter half of the 16th century: these pieces are the work of a Nuremberg *kistler*, who, although his identity has been lost, can, on the basis of his yet distinctive work, be called the Master of Perspective.

(Fig. 42)

Court casket

GOLDSMITH'S WORK: WENZEL JAMNITZER . NUREMBERG, CA 1570

EBONY, FIRE-GILT SILVER, LAPIS LAZULI, FELDSPAR, BLOODSTONE, AMETHYST,

QUARTZ, COLD ENAMEL . HEIGHT 40 CM, WIDTH 38 CM, DEPTH 47.5 CM . CHICAGO, LOYOLA UNIVERSITY MUSEUM OF ART

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Why the Master of Perspective specialised in representing illusionistic polyhedra according to the rules of linear perspective can be made clear based on a copperplate published by Daniel Meisner in the *Thesaurus PhiloPoliticus* in 1624 (Fig. 43): as representatives of the Free Imperial City of Nuremberg, Johann Neudörffer and Wenzel Jamnitzer are depicted at a long table on a dais with the familiar cityscape in the background. On the left the mathematician is working, compasses in hand, in front of an open geometry book; on the right, the goldsmith is designing geometric solids with the aid of his perspective machine. Polyhedra as abstract configurations are represented on and beneath the table. In this key picture, they have come to symbolise the scientific and aesthetic achievements of the city of Nuremberg.

This copperplate eliminates all doubt about the origin of the court casket from Newbattle Abbey and the small group of related Kunstkammer furnishings: they were all made in Nuremberg. Only in Nuremberg could the preliminary sketches for such complex polyhedral figurations be machine-generated. And only in Nuremberg had geometric solids become the city insignia as symbols of the interrelationship of art and science. On a magnificent piece of furniture such as the Newbattle Abbey casket, the marquetry polyhedra were at once a trademark and a seal of quality that signalised to viewers: here is a prime work from Nuremberg.

(Fig. 43)

'Nil Melius Arte': emblematic representation of Nuremberg, 1624

IN DANIEL MEISNER'S *THESAURUS PHILOPOLITICUS* . MUNICH, BAVARIAN STATE LIBRARY

INV. NO. MAPP. 27-1/6

THE ENTIRE UNIVERSE ON A CASKET: FROM GEOMETRY TO THE DOCTRINE OF THE FOUR TEMPERAMENTS

Since Greco-Roman antiquity the five regular polyhedra have been regarded as the basic building blocks of the universe created by a divine demiurge and the expression of perfect beauty and harmony. The reason why they are often called 'Platonic solids' is associated with the fact that Plato included them in his comprehensive teachings on the elements and linked them with the physical elements. By analogy he associated the tetrahedron (pyramid) with Fire, the hexahedron (cube) with Earth, the octahedron (a solid with eight faces) with Air, the icosahedron (twenty faces) with Water and the dodecahedron (twelve faces) with the aether, which was supposed to represent the fifth element of the universe.[33]

The natural philosophical and cosmological symbolism of the polyhedron would be responded to and crucially expanded in the Renaissance. The numerous variations on the five Platonic solids in the copperplates engraved by Stör, Lencker and Jamnitzer (Figs. 30-33) were associated not only with the Four Elements and the aether but also with man's five senses and the Christian doctrine of Redemption.[34] In Jamnitzer especially, the genesis of geometric solids is interpreted in analogy with the mechanisms of the divine Creation and the illusionistic representation of geometric solids as the outcome of physical study of mathematical principles that grants artists insight into the structures of the universe and aids in better understanding mankind.[35]

(Fig. 44)

The Four Temperaments

SANGUINEUS

(Fig. 48)

Representation of the Sanguine

ON THE NEWBATTLE ABBEY CASKET

Jamnitzer writes on this in his preface to the *Perspectiva corporum regularium*: 'How marvellously has God arranged the Four Elements / and the fifth substance under the heavens / out of which all earthly bodies / and we men ourselves / are created and measured / and everyone has his complexion and characteristics [...].'[36] Thus he links polyhedra as universal building blocks with mankind, whose four 'complexions', i.e. temperaments, also depend on the Four Elements.[37] It is no coincidence that the marquetry polyhedra on the Newbattle Abbey casket are accompanied by engraved representations of the Four Temperaments. Here the Sanguine, the Phlegmatic, the Choleric and the Melancholic type appear as allegorical figures, whose attributes and symbolic animals have been borrowed from an identically themed copperplate series by Virgil Solis (Figs. 44-47).[38]

(Figs. 44-47)

The Four Temperaments

VIRGIL SOLIS . NUREMBERG, MID-17TH CENTURY . ENGRAVING . HEIGHT 7.1 CM, WIDTH 5.4 CM

MINNEAPOLIS, MINNEAPOLIS INSTITUTE OF ART, INV. NOS. 2015.93.84.1-4

(Fig. 45)

The Four Temperaments

COLERICUS

(Fig. 49)

Representation of the Choleric

ON THE NEWBATTLE ABBEY CASKET

The lute player represents the Sanguine type (Fig. 48), whose inclination to harmony is expressed in her musical instrument and music book. The allegorical figure stands on clouds to match the association of this particular Temperament with Air. In the background a horse appears as a symbol of beauty while a peacock in the foreground hints at the vanity to which this type of person tends.

Across from her stands the personification of the Choleric type (Fig. 49), surrounded by the flames that speak for her proverbially fiery character. She is accompanied by an eagle and a lion, which symbolise strength and power.

On the front of the court casket the personification of the Phlegmatic type (Fig. 50) is wading in water. She holds up a skewer with sausages and a ladle to suggest gluttony as the sin to which the Phlegmatic type is prone. A donkey – the animal symbolising the apathy and simplemindedness that distinguish this type of person – swims in the same water.

(Fig. 46)

The Four Temperaments

FLEGMATICUS

(Fig. 50)

Representation of the Phlegmatic

ON THE NEWBATTLE ABBEY CASKET

On the left across from the personification of the Phlegmatic type stands Melancholy (Fig. 51), who is not lost in thought as she usually is depicted but is portrayed as dynamic and active: compasses in hand, she walks briskly past a column. She stands for the intellectual and spiritual potential that enables the Melancholic type to be creative in the arts and sciences.[39]

(Fig. 47)

The Four Temperaments

MELANCOLICUS

(Fig. 51)

Representation of the Melancholic

ON THE NEWBATTLE ABBEY CASKET

Above and beyond their links to the Four Elements, the Temperaments are also associated with the theological virtues – Faith *(Fides)* and Hope *(Spes)* – and two of the four Cardinal Virtues (Figs. 52-53): Fortitude or courage *(Fortitudo)* and Prudence *(Prudentia)*, which are represented on the narrow sides of the court casket, also after engravings by Virgil Solis.

The four history pictures in the centre of each side of the court casket refer to the association of Temperaments and Virtues, too: indeed, these scenes not only function as *exempla* from the Bible and Greco-Roman mythology but each also illustrates a Temperament.

(Figs. 52-53)

Representation of the Virtues

ON THE SIDES OF THE NEWBATTLE ABBEY CASKET

GREAT MEN IN THRALL TO THE TEMPERAMENTS

The front of the court casket shows the story of Sophonisba and Massinissa (Fig. 54) engraved on ivory after a copperplate by Heinrich Aldegrever (1502-1555/61) dating from 1553 (Fig. 55).

During the Second Punic War, Sophonisba, daughter of a Carthaginian general, had married Syphax, king of a western Numidian tribe. Sophonisba persuaded her husband to desert his Roman allies and fight on the Carthaginian side. After Syphax was defeated, Sophonisba fell into the hands of Massinissa, to whom she had once been betrothed.

(Fig. 54)

Ivory engraving showing Sophonisba and Massinissa

ON THE NEWBATTLE ABBEY CASKET

Massinissa fell in love with her again at once and married her to save her from violence at the hands of the Romans. Afraid of the baleful influence exerted by the scheming Sophonisba, the Romans demanded she should be delivered up to them, whereupon she committed suicide by taking poison.

On the court casket Sophonisba is depicted next to Massinissa just as she is about to drink from the poisoned cup. The focus is, therefore, on suicide, to which *homo melancholicus* has a general tendency.

(Fig. 55)

Sophonisba drinking poison

HEINRICH ALDEGREVER . SOEST, DATED 1553 . ENGRAVING . HEIGHT 11.4 CM, WIDTH 7.3 CM

LOS ANGELES COUNTY MUSEUM OF ART, INV. NO. AC1993.174.1

On the back of the court casket the story of Herkinbald (Fig. 56) is illustrated, also after an Aldegrever copperplate (Fig. 57). The legendary Duke of Brabant had on his deathbed killed his beloved nephew because the latter had raped a woman and because the Duke's family had tried to save the young man from the death penalty imposed by his uncle. Unlike the late medieval legend, which focuses on the virtue of *severitas*, unflinching severity in abiding by the letter of the law,[40] the violence of the old man, who is cutting his nephew's throat, is the character trait that has been given priority here.

(Fig. 56)

Ivory engraving showing Herkinbald and his nephew

ON THE NEWBATTLE ABBEY CASKET

This scene has not been fortuitously placed next to the personification of the *cholericus*: Herkinbald was in fact regarded as a positive exemplum of the hot-blooded Choleric type.

(Fig. 57)

The justice of Herkinbald

HEINRICH ALDEGREVER . SOEST, DATED 1553 . ENGRAVING ON PAPER . HEIGHT 11.3 CM, WIDTH 6.9 CM

NEW YORK, THE METROPOLITAN MUSEUM OF ART, INV. NO. 62.635.511B

On the right-hand narrow side of the court casket, the Phlegmatic type appears in the person of Aristotle, who is being made a fool of by a youthful Phyllis (Fig. 58). To revenge herself on the philosopher because he had blocked Phyllis's love affair with the Macedonian prince, Alexander, the young woman seduced Aristotle and demanded of him as proof of his love that he allows himself to be saddled and ridden like a horse. The cautionary tale is illustrated here with the scene in which the infatuated philosopher is made to look ludicrous, harnessed with a bit in his mouth and driven on by blows from Phyllis's whip. Thus Aristotle makes an ass of himself – the donkey is the emblematic animal associated with the Phlegmatic type (Fig. 50).

(Fig. 58)

Ivory engraving showing Phyllis and Aristotle

ON THE NEWBATTLE ABBEY CASKET

Finally, the biblical story of Samson and Delilah (Fig. 59) is informative on the character traits of the Sanguine type. In the Old Testament it is told how Samson time and again delivered the Israelites from the Philistines. His invincible strength came from his hair, which God had commanded him to leave unshorn. However, he revealed this secret to his wife, Delilah, who then betrayed him (Judges 13.1-16.31). The openness and volubility characteristic of the Sanguine type, the qualities which caused Samson's downfall, are the thematic gist here.

(Fig. 59)

Ivory engraving showing Samson and Delilah

ON THE NEWBATTLE ABBEY CASKET

The bloodthirsty sense of justice displayed by Herkinbald, the suicide of the calculating Sophonisba, the folly displayed by the lovesick elderly Aristotle and the blind confidence that brought down the straightforward Samson are to be understood unequivocally as *exempla* of the Four Temperaments. The four history pictures, on the other hand, can be interpreted differently. Representations of Phyllis and Aristotle and Samson and Delilah especially were often used in northern European Renaissance art as the subject of pictures with a moralising message, in which a male hero is the victim of his love for a woman.[41] Both scenes appear in a woodcut by Peter Flötner (Fig. 60), who used stories from the Bible and tales from antiquity as exemplifying what were known as women's wiles. The ivory engraver who worked on the court casket was in turn evidently inspired by Flötner. Samson and Aristoteles, Herkinbald and Massinissa are *exempla virtutis*: they are virtuous yet, under the influence of their respective Temperaments, they are induced to behave in ways that have disastrous consequences for them. The cautionary message runs: sound knowledge of the Temperaments is of paramount importance to leaders of men to ensure both their personal success and the maintenance of the social order.

(Fig. 60)

The wiles of women

Samson and Delilah, David and Bathsheba, Solomon worshipping the idols and Aristotle and Phyllis

PETER FLÖTNER . NUREMBERG, CA 1534 . WOODCUT . HEIGHT 17.8 CM, WIDTH 36.5 CM

BRUNSWICK, HERZOG ANTON ULRICH-MUSEUM

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Representations of the Temperaments on Renaissance furnishings are extremely rare; when they do occur, however, they are unambiguously embedded in an iconography of power. This is attested not only by the court casket from Newbattle Abbey, but also by a writing-desk dated 1568 that was once owned by Anna of Denmark, Electress of Saxony (1532-1585). Now in the Museum of Decorative Arts in Dresden, it boasts similar ivory inlay with engraved representations of the Temperaments (Fig. 61).

Characteristically, the Temperaments on the Dresden writing-desk are associated, on the one hand, with Hercules, whom many monarchs claimed as a mythical forebear, and, on the other hand, with the four Evangelists, from whose Logos the Christian order derives.[42]

(Fig. 61)

Writing-desk owned by Anna of Denmark, Electress of Saxony

MASTER OF PERSPECTIVE . NUREMBERG, DATED 1568

NATIVE WOODS, EBONY, PARTLY ENGRAVED IVORY AND BONE; FITTINGS: FIRE-GILT BRASS

HEIGHT 17.4 CM, WIDTH 50 CM, DEPTH 55 CM . DRESDEN, MUSEUM OF DECORATIVE ARTS

INV. NO. 47 706

Although the Dresden writing-desk has no marquetry polyhedra, it was nonetheless obviously made in the workshop of the Nuremberg Master of Perspective. This is shown by structural features it has in common with other pieces from the workshop as well as the ivory engravings. The Master of Perspective and his workshop undoubtedly targeted a social elite – highly likely to have consisted of the princes and members of the nobility who spent time in Nuremberg when the Imperial Diet convened or other imperial business was conducted.[43]

At least this can be inferred from the provenance of individual objects. The miniature cabinet in the Metropolitan Museum of Art once belonged to Albrecht VII, Archduke of Austria (1559-1621), Stadholder of the Spanish Netherlands, whose coat of arms was later added to the fall front in reverse-glass painting (Fig. 9). The games board in the Kunsthistorisches Museum in Vienna (Fig. 13) came from the Kunstkammer established by Ferdinand II, Archduke of the Tyrol (r. 1564-1595), at Ambras Castle, where it was entered in the 1596 inventory as 'a boardgame inlaid inside with mother-of-pearl, black sandalwood [ebony] and ivory'.[44] Finally, the Newbattle Abbey casket came at the latest in the 18th century into possession of the marquesses of Lothian, who fitted it with an 18th-century stand (Fig. 62).

The original owner of this extraordinary court casket is unknown. What is certain is that at the time it was made, it was an exclusive artwork of great material, aesthetic and ideal value – in short, a Kunstkammer object to match princely aspirations that must have aroused pangs of covetousness in the most important Renaissance collectors. The polyhedra represented on it contributed substantially to the high esteem in which it was held.

After all, plane geometry and solid geometry were ubiquitous in late 16th-century court collections: a wide variety of drawing instruments, perspective machines and wooden models were displayed along with the publications of Lencker and Jamnitzer.[45] Geometry was viewed as the key to understanding and ruling the world. Accordingly, geometry-related exhibits not only pointed out how scholarly the head of a household was but also projected the image of a ruler who designed his country and its society with the same perfectionism he lavished on drawing geometric solids on paper.[46]

The Temperaments also played a major role in princely Renaissance Kunst- and Wunderkammer. The vaulted ceiling of the *studiolo* in which Francesco I de' Medici (r. 1574-1587) engaged in intellectual pursuits is decorated with personifications of the Temperaments in four spandrels.[47] The Temperaments are embedded in the cosmological system by virtue of their association with the planets and Elements – as they are on the Newbattle Abbey court casket, which, as a Kunstkammer *en miniature* subsumes the Renaissance culture of collecting and, as such a precious item, represents a highpoint of court cabinetmaking.

(Fig. 62)

The court casket of Newbattle Abbey

ON ITS 18TH-CENTURY STAND

[1] V. Spenlé: Der Kabinettschrank und seine Bedeutung für die Kunst- und Wunderkammer des 17. Jahrhunderts, in: Laue 2008, pp. 10-23, especially p. 12; Alfter 1986, p. 22. [2] The Wrangelschrank, which is kept in the Westphalian State Museum in Münster, is dated twice on the bottoms of the drawer boxes and has been given a maker's mark that up until now has not been linked to the name of any particular master craftsman. Most recently on this: Lorenz / Jutzi 2011. [3] For this type of coffer, see above all Wenzel Jamnitzer's magnificent court coffers: Veltrup 2008, pp. 109-152. Another casket worth mentioning in this connection is the piece known as the 'Walbaum Cabinet' in the Berlin Museum of Decorative Arts, which is of a somewhat later date: Berlin 2013. [4] For the *Mazzocchio* as a perspective motif: Richter 1995, pp. 26-28. [5] Colsman 1999, pp. 132-139, Cat. No. 69; Mauriès 2002, pp. 124-125. [6] Spenlé 2011, pp. 69-83, p. 74. [7] Hoos 1989; Frankfurt 1987, pp. 44-45. [8] Vienna 1998, pp. 160-163, Cat. No. 81. [9] Christie's 2004, Lot 142. [10] Ibid, Lot 141. [11] Alfter 2008, p. 44; Alfter 1996, pp. 15-17. [12] Alfter 1996, pp. 24-25. It is above all Lieselotte Möller that we are indebted to for pointing out the importance of the Tyrol in the production of cabinets decorated with marquetry: Möller 1956, pp. 112-133. [13] Alfter 1996, p. 23. [14] Filarete was the first, in the 1440s, to point out Brunelleschi as the inventor of (one-point) linear perspective; see Edgerton 2002, p. 113 and pp. 129-137 for Brunelleschi's method. [15] Panofsky 1980, p. 126. [16] 'Né restò di mostrare a quelli che lavoravano le tarsie, che è un'arte di commettere legni di colori: e tanto gli stimolò, ch'e' fu cagione di metterla in buon uso; ché si fece di quel magisterio, et allora e di poi molte cose eccellenti che hanno recato e fama et utile a Fiorenza per molti anni', Vasari 1568, Vol. 3, p. 143. [17] Fedeli 2013, p. 24; Bach 2009, p. 74; Chastel 1953. [18] For the link between cartography and linear perspective: Edgerton 2002, pp. 85-112, especially p. 111; for perspective and marquetry as a network of lines: Bach 2009, pp. 75-76, Chastel 1953, pp. 144-145. [19] Peiffer 2008; Seidenfuß 2006; Peiffer 2006; Richter 1995. [20] Richter 1995, p. 61. [21] 'Künstlichen werckleut, als Steinmetzen, Maler, Bildhauer, Schreiner, und dergleichen Künstler', thus the mathematician Wolfgang Schmid in his *Erst Buch der Geometria* (1539); quoted in Richter 1995, p. 58. [22] Wood 2003, p. 238; Pfaff 1996, pp. 8-11; Richter 1995, p. 69. [23] 'Den Schreinern In eingelegter Arbait dienstlich', Stör 1567, front page. [24] Alfter 1986, p. 16. [25] Möller 1956, p. 151. [26] For the drawings in Lorenz Stör's œuvre: Stoer 2006; Wood 2003; Pfaff 1996. [27] Frieß 1993, pp. 77-108. [28] On Jamnitzer as the inventor of scientific instruments: Hauschke 2009, Hauschke 2007. [29] Jamnitzer 1568, n. p.; Frieß 1993, pp. 87-92. [30] 'Seinen Perspektiv Tisch inn einer sondern Stuben inn seinem Hauß', 'Kästlein [...] / das solches an alle Ort wohin man will / kann gesetzt vnnd getragen / vnd die Perspectiv nach eines jeden wolgefallen / darauff zu wercken vorgenommen werden,' Pfinzing 1599, p. 9. [31] Veltrup 2008, pp. 206-207. [32] Ibid., p. 10, pp. 109-152. [33] Richter 1995, pp. 19-20; Felfe 2015, pp. 182-183; Böhme / Böhme 1996, p. 143. [34] Felfe 2015, pp. 194-225. [35] Ibid., pp. 205-209. The same is true of Jamnitzer's casts from nature: Spenlé 2015, Smith 2004, pp. 74-80. [36] 'Wie wunderlich hat nur der liebe Gott die vier Elementa / und derselbigen fünffte wesenheyt vnter dem himel geordnet / darauß alle irdische Cörper / und wir menschen selbs / genaturet und gemessigt werden / und ein jeder sein Complexion und eigenschafft hat [...].' Jamnitzer 1568, n. p. [37] For the doctrine of the Temperaments and Humours: Schmidt 2005; Keil 2005; Klibansky / Panofsky / Saxl 1992, pp. 39-54; Böhme / Böhme 1996, pp. 164-171. As a survey of the Four Temperaments and their characteristics in antiquity:

Klibansky / Panofsky / Saxl 1992, pp. 118-120. [38] For the iconography of the Sanguine, Choleric, Phlegmatic and Melancholic types: Lütke Notarp 1998, pp. 72-84, pp. 119-163, pp. 247-282, pp. 164-246. [39] Klibansky / Panofsky / Saxl 1992, pp. 351-352, p. 528, Lütke Notarp 1998, pp. 164-246. [40] Damm 2000, pp. 98-101. [41] Ressos 2014, p. 142, pp. 146-157. [42] Dresden 2009, Cat. No. I.46. For the association of the Temperaments with the Evangelists: Klibansky / Panofsky / Saxl 1992, pp. 512-522. [43] Tacke 2002. [44] 'Ain pretspiel, so inwendig mit perlmueter, schwarz sandholz und painwerch eingelegt ist,' Boeheim 1888, p. CCCXI, fol. 477r.; also see Vienna 1998, pp. 160-163, Cat. No. 81. [45] For the geometric wooden models: Felfe 2015, pp. 192-193, Marx 2014, pp. 52-53; for the treatises: Marx 2014, p. 50; Melzer 2010, § 18-25; for perspective machines and drawing instruments: Marx 2014, p. 51; Marx / Plaßmeyer 2014, pp. 75-76; Gluck 2008. [46] Korey 2007, pp. 44-45, pp. 54-56. [47] Bardeschi 1980, pp. 46-47, p. 50.

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